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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,620	12/05/2001	Atsushi Sakamoto	401471/CHISSO	1955
23548	7590	12/22/2005	EXAMINER	
LEYDIG VOIT & MAYER, LTD 700 THIRTEENTH ST. NW SUITE 300 WASHINGTON, DC 20005-3960			SAYALA, CHHAYA D	
			ART UNIT	PAPER NUMBER
			1761	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/002,620

Applicant(s)

SAKAMOTO ET AL.

Examiner

C. SAYALA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-20, 22-27, 29, 32-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 4-13, 20, 22-27, 29 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed 3/29/2004 has been considered and a signed copy of this form was mailed 5/19/2005.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 6, 33-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The basis for the limitation of "0.013" into the above claims could not be found in the specification. When applicant has pointed out proper support, this rejection will be withdrawn.

In claim 6, the limitation "if a *water-soluble phosphoric acid* is present" could not be found in the specification. Only sparingly soluble phosphate salts could be found. In

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addition the ratio being 0.5 or less in this instant of using phosphoric acid, also could not be found.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "if" in line 1 is indefinite. Claim 6 is indefinite because it is not clear if applicant intends the phosphate to be present or not. For examination purposes only, this is being interpreted as "optional".

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 4-7, 20, 29, 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Bardsley (US Patent 3979198).

Table I teaches a mixture of potassium metaphosphate and urea-formaldehyde as a nutrient filler particle and meets claims. Note the amounts that appear to overlap with those claimed. Table I enables the use of pulverized and granular urea-formaldehyde in an amount of 13% and potassium meta phosphate in an amount 1%, which falls within the range claimed. As for claim 20, which includes the step of adding to the urea/aldehyde condensation product, a sparingly soluble phosphatic fertilizer, the reference teaches just that and therefore, meets the limitation describing the physical characteristics making it inherent.

4. Claims 4-8, 20, 22, 29, 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Rehberg et al. (US Patent 5174804).

See claims 7, 9 and 12 and specifically, Example 6.

5. Claims 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (US Patent 6500223).

See claim 1, col. 9, line 62 to col. 10, line 9.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-13, 23-27, 29, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardsley et al., Rehberg et al. in view of Goertz et al. (US Patent 4025329) and Mason (US 3205061) and Stansbury et al. (US Patent Re 27238).

The primary references are as discussed above. They do not teach particle size of the phosphate and urea-aldehyde product is combined with a wax. Goertz teaches combining a urea formaldehyde fertilizer with phosphate and also teaches sizes for fertilizer granulates. One skilled in the art who is considering the manufacture of urea-aldehyde products for fertilizers would have been motivated to follow the size of particulates given in this reference at col. 4. Combining urea fertilizers with water insoluble wax is known in the art, as shown by Mason and Stansbury et al., and for the slow-release properties that this provides, it would have been obvious to one of ordinary skill to incorporate such in the teachings of the primary references. See for instance, Mason at col. 2:

One method of reducing the rate at which the fertilizer is consumed is to mix the fertilizer and molten wax, i.e., disperse the fertilizer in molten wax, form the dispersion into small particles in a mold and allow the particles to cool below the melting point of wax. The resulting particles are a dispersion of solid fertilizer particles in solid wax. Substantially all the fertilizer particles are surrounded by and encased in wax. They can also be described as a slow release fertilizer.

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See Stansbury et al. at claims 8 and 9, which recites encapsulating the fertilizer composition with wax to encourage slow-release properties. The specification shows the fertilizers itself at col. 7, lines 25+.

***Allowable subject matter***

Claims 14-19 have been indicated as having allowable subject matter. See Office action 6/18/2004.

***Response to Amendment***

Applicant's arguments filed 9/29/2005 have been fully considered but they are not persuasive.

The Bardsley reference is still applicable based on Table 1 and the ratio of  $P_2O_5$  to urea/formaldehyde condensation product that may be calculated from it. Bardsley teaches %Composition ranges at Table 1, which includes amounts of 1% potassium meta phosphate and 13% granular and pulverized urea formaldehyde in combination. Remarks made with respect to the Rehberg et al. reference were not convincing because the calculations presented are limited to Example I which shows IBDU. Applicant's attention is drawn to other examples, which teach other fertilizer compositions and col. 4, which points out preferred compositions of NPK fertilizers. See for instance, line 35. Arguments presented for EP '980 and Kealy et al. and Kealy are convincing and those rejections have been withdrawn. Applicant's arguments with respect to the 35 USC 103 are not well taken. The references were used to provide the

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limitations not shown by the primary references, namely, size limitations and wax encapsulation. The secondary references teach such limitations. Both references are to fertilizers, Goertz et al. to urea formaldehyde (U-F) and the remaining two to urea slow release fertilizers. If Goertz also combines phosphate and U-F and provides particle sizes, then it provides a teaching of typical sizes for a fertilizer of similar composition. Thus this provides a teaching to one of ordinary skill in the art who is looking to find particle sizes for similar fertilizer compositions. Stansbury et al. and Mason show that encapsulating fertilizers of urea, provide or enhance slow release properties, and this obviously provides motivation. One of ordinary skill in the art therefore, would combine such teachings with the primary references, which teach the same composition as the instantly claimed invention.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



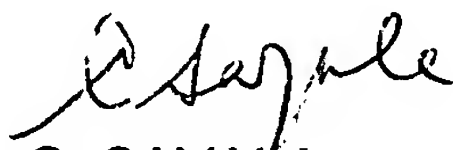
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA whose telephone number is 571-272-1405.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
C. SAYALA  
Primary Examiner  
Group 1700.